

Future Directions

Another step in knowledge management is providing it in a format that is useful to a new generation of employees. That means organizing our information for access through tools that the next generation is already comfortable using – tools that in many cases are improvements over the tools we currently use.

Instant Current Awareness – RSS

Imagine being able to gather current information from a particular source, or on a particular subject, at the moment that information is posted online. Imagine being able to gather information from a wide array of sources on a current research subject, and have it automatically gather in one place for your periodic review.

RSS – or Really Simple Syndication – is a tool designed for sharing quickly changing web content. Think of it as a distribution tool for late-breaking news. RSS “feeds” can be created for many online resources, including Wikis and Blogs, discussed in greater detail below. RSS-aggregators, also known more generically as “news readers,” can be built into web browser or e-mail software that sits on your computer or server, or it can be web-based.

Most WSDOT employees do not currently have news readers built into agency-supplied software. Web-based aggregators, such as *Newsgator* or *Bloglines*, are free, and allow access to feeds from any Internet-accessible computer.

Collaborative Information Refinement – Wikis

Imagine being able to develop a database of specialized information in collaboration with people all over the world, where identified users can add and refine information, as well as refine the way the information was indexed and structured.

A **Wiki** is a software tool that allows for the collaborative collection, organization, and refinement of information. Perhaps the best known is *Wikipedia*, an encyclopedia created entirely by volunteer input that now has over 7 million articles in 200 languages. A Wiki is interesting in that it allows the organization of the content to be edited in addition to the content itself, allowing one to look at information from a chronological, geographic, or other perspective, depending on the need. Wikis are great tools for collaborative

project management and accountability, for the development and continuous refinement of “Lessons Learned,” and for knowledge management in general. Research project management, and the writing/updating of technical manuals are just some of the ways Wikis are being employed by DOTs.

Wiki software is open source and available for download from its original developer, Ward Cunningham. Included are tips for site operators that offer pointers for introducing Wiki into a shared work environment. Integrating use of Wikis could be done relatively easily but will require training for employees and guidance on editorial oversight.

Online Public Forums – Blogs

Imagine being able to post a series of alternative proposals regarding any project, and solicit feedback from anyone in the world about each alternative. Or imagine floating an innovative idea, and then being able to keep track of all the places that are referring to your idea.

Web logs – known as “blogs” for short – are web-based interactive journals. They have the added advantage of allowing comments by readers, so that public – or employee – opinion around a project, issue, or event can be quickly gathered and responded to. They also can feature “track-backs,” an enhancement that lets the blog’s moderator know who’s linking to the blog from other web sites.

The *WSDOT Blog*, initiated in late 2006, has won public kudos for presenting WSDOT as a “wired” and responsive organization. Blogs could be developed further for use in collaborative project and product refinement, and the gathering of opinions and information around certain products or issues.

Customized Topical Websites

Imagine being able to provide “one-stop” information dissemination to stakeholders involved in time-sensitive initiatives or long-term collaborative projects, organized around appropriate headings, under which key documents or links have been placed.

A customized webpage designed with your priorities in mind is just another example of the selective dissemination of information service long provided by librarians. The WSDOT Library staff is dedicated to delivering information in a way that best suits your needs. We can add and update information, as appropriate. The online “WSDOT Staff Legislative Notebook” is a prime example. From this page, readers can find out how to testify before the Legislature, track bills, link to laws and regulations, and check on the status of agency-sponsored legislation. Plans for additional websites are in the works; they are a very effective and efficient means to manage the distribution of information for a specific topic or project.

Managing Knowledge at WSDOT – The Information You Need When You Need It

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Information . . .


We need it to do our job. But it’s like that old saying, “Water, water everywhere but not a drop to drink.” Everyday we develop information that is of use to others. But that information can be hard to find; and if we don’t find it we develop information that may be duplicative; or we find conflicting information when outdated documents aren’t replaced.

And some days we find so much it feels like we are drowning. It takes a broad range of very specialized information to design, build, maintain, and operate the state’s transportation system. How can we use our existing resources and gather new information without being overwhelmed?

The WSDOT Library is working to help you obtain and manage information you need in three ways:

- Improving the way we organize information resources for easy retrieval by employees and the public.
- Improving access to information and knowledge resources by creating a department information portal.
- Providing value-added search tools and services to get employees the information they need in a timely fashion.

The term for these efforts is “Knowledge Management.”



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What is Knowledge Management?

In the last 50 years, manual work has been largely replaced in our economy by knowledge work. However, a corresponding shift in managing the productivity of knowledge work (in the same way that the productivity of manual work has been managed) has only recently taken place.


One of the hallmarks of Knowledge Management is the treatment of information as if it were the product of a business. Who needs it? How should it be packaged? How do people find it on the shelf and in the market? You can see around WSDOT today many examples of this approach, such as the Lessons Learned Database and person-to-person linkages formed in the Communities of Practice groups. We are also working to capture the knowledge of employees when they retire, so that what they know is not lost to the organization, but lives on at WSDOT into the future.

Benefits of Knowledge Management to WSDOT

- Faster, better information searches by employees and contractors through use of common vocabularies for key word searches.
- Highlighting current data and information to support higher-quality decision-making.
- Savings on server space by eliminating redundant web pages and electronic documents.
- Source document identification and version control to protect against information inconsistencies and errors.
- Better search results because outdated materials are archived.



To make knowledge work productive will be the great management task of this century, just as to make manual work productive was the great management task of the last century. The gap between knowledge work that is managed for productivity and knowledge work that is left unmanaged is probably a great deal wider than was the tremendous difference between manual work before and after the introduction of scientific management.



— Peter Drucker, *The Age of Discontinuity: Guidelines to Our Changing Society*

Managing the Knowledge We Produce

WSDOT’s knowledge resources are substantial:

- Over 165,000 Intranet pages and approximately 77,500 Internet pages are maintained by the Interactive Communications Web Team;
- More than 150,000 plans and as-builts are being scanned into the Records Management Information System (an Accordé database) by Engineering Records;
- Over 40,000 print monographs and serials are currently held by the WSDOT library. It also maintains nearly 90 electronic journals and hundreds of digital publications;
- Roughly 2,500 in-house electronic publications need standardized indexing attention;
- A huge but unknown number of photographs (digital photographs and historic print photographs) are being maintained and accessed using a wide variety of media and methods by Engineering Records, Communications, the Aerial Photography lab, Geotechnical Services, and regional project offices;
- But “knowing what we know” takes work. We need to improve awareness of and access to these and other information resources.
- A Data Catalog comprised of 430 separate databases, linking over 160,000 data elements is maintained by Information Technology.

Developing WSDOT’s Knowledge Network

The WSDOT Library is working with the Communications Office, the Office of Information Technology, the Library Advisory Board, and other groups to develop a Knowledge Network within the department. Elements of the network include:

- Establishing a portal of information resources within WSDOT – think of how you use the Yellow Pages in your phone book and you’ll get the idea of the Information Portal.
- Improving the organization of our information and knowledge so that there is less need to store information in duplicate locations. This effort is being developed with the WSDOT Web Team, Document Management Committee, and the Enterprise Content Management portion of the Statewide Project Management Group to ensure that terminology and process are useful to the business of the department.

A core element of this will be developing a framework for labeling information. Common phrases in the information and library sciences communities are “standardized metadata” and “controlled vocabularies.” The framework will use these principles but, with the advances in information technology and software, much of this will be invisible to the user. Instead, a user will be able to enter and search for information using “natural language.”



Adding Value to Information

While the ways in which we find and store information are very new, the role of the librarian is not: they continue to help you find the information you need. The librarians within WSDOT do this by providing:

Literature Reviews

Reviews of current and published research in subject-specific areas can be done. Recent examples include: the effects of bridge shading on plant life; the correlation of reduced congestion and increased safety at traffic intersections; roadside advertising and driver distraction; and current wetland performance evaluation.

Subject Bibliographies

Lists of print and online information resources on a particular subject, including location information, can be tailored to the client’s need. Examples available include Work Zone Safety, Wetland Environments and Mitigation, Workplace Safety, Management Videos, and PE Exam Preparation.

Online Clipping Service

We currently provide daily “Online News Clips” to over 700 subscribers within WSDOT. Every day before noon, you’ll receive a subject-sorted compilation of links to WSDOT- and transportation-related news gathered from that day’s state, regional, and national print and broadcast news media. Keep yourself aware of how current news stories, opinion pieces, and letters to the editor talk about WSDOT, whether it’s the Alaskan Way Viaduct, congestion, safety, commuting, or any host of other subjects, if it talks about WSDOT, we “clip” it for you.

News Alerts

We can help you to maintain current-awareness of specialized topics in transportation through the weekly delivery of custom News Alerts. We are currently providing, as weekly news alerts, information on High Occupancy Tolling (HOT) Lanes, and the role of Public/Private Partnerships in transportation finance. Let us keep you up-to-date on the information you need.

Fact-checking

On the Internet anyone can post anything. It can be a costly mistake to assume that it has to be true because it’s on the Internet. Librarians are skilled at checking the facts, and determining reliable sources of information. It’s one of the skills for which librarians are traditionally honored, and it’s needed more now than ever.

Information Delivery

Just as the tools engineers and designers use have “gone digital” in the past 20 years, so have the tools of the librarian. Books and magazines are still printed, and we still check them out. But increasingly, we are able to provide this information to you in a digital format, either via the web in an HTML form, or e-mail in a PDF document. Our web site provides full text access to hundreds of engineering texts via Civil Engineering Net Base, and nearly 100 journals are accessible online, either directly from your desktop, or by the librarians, via our online journals web page. Transportation libraries nationally are connecting in larger knowledge networks, and obtaining materials from them for you is often a simple matter of e-mail.

Discussion Groups on List Servers

There are tens of thousands of list servers with tens of millions of members around the world. The library can help you to connect with other professionals in your discipline who are interacting to share their collective knowledge, gather information or solicit input on new ideas. Discussion groups on list servers enable one user to interact with a large group of people sharing a common interest via a single e-mail message. This collaborative technology has been around for quite awhile. Libraries today use this “one-to-many” aspect to push information out to members of groups defined by practice areas, “hot topics” or other common interests.